May 26, 1931. A. SHATKIN 1,807,444

COLLAPSIBLE HOUSING FOR WRITING INSTRUMENTS

Filed Oct. 1, 1929

Fig. 1

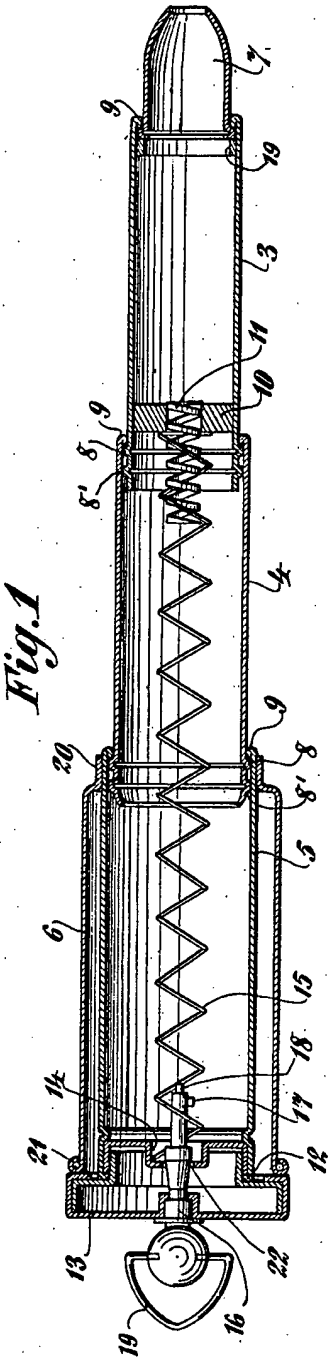
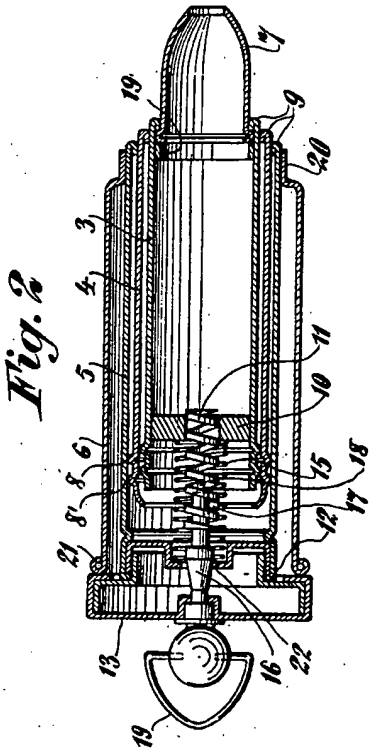


Fig. 2



INVENTOR
Aaron Shatkin,
BY
ATTORNEY

Patented May 26, 1931 1,807,444

UNITED STATES PATENT OFFICE

AARON SHATKIN, OF BROOKLYN, NEW YORK

COLLAPSIBLE HOUSING FOR WRITING INSTRUMENTS

Application filed October 1, 1929. Serial No. 396,427.

My invention relates to collapsible housings for either pencils or fountain pens, and the object of my invention is to provide a simple, practical and inexpensive construction, which is characterized by its rigidity when the housing is fully extended due to the particular novel collapsible housing construction, and further by the novel means for locking the housing when collapsed.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the accompanying drawings, forming a part of this application, similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal section through my collapsible housing for writing instruments, when the same is fully extended.

Figure 2 is a similar section of my invention when same is collapsed and locked.

Referring to the drawings, 3, 4, and 5, are concentric tubes, sliding co-axially within one another as shown, each of which tubes is turned in at one end to form inside bead 9, which end is hereinafter referred to as the bead end of tube. At the other end of each of tubes 3 and 4, are spun outward two shoulders 8 and 8′. This end of tube is hereinafter referred to as the shoulder end. These shoulders 8 and 8′ are the actual and only contact surfaces of any of said tubes with the inside of the next outside tube. Bead 9 acts as a stop when up against shoulder 8, the tubes being unable to slide any further outward thereafter. I bring particular attention to the manner in which I construct the stop and sliding features of my contrivance. The double shoulder 8 and 8′ is easy to produce by a simple spinning operation and the construction shown affords excellent rigidity and little friction.

A head 7 is set into tube 3 at its bead end. Close up to head 7 is set washer 19 firmly attached to tube 3. Inside tube 3 is set washer 10 which is securely attached to tube 3. Through washer 10 and to it firmly attached is spring coil 11.

The remote end at shoulder end of tube 4 is reduced a little, so as to prevent tube 4 from sliding out when the housing is collapsed, said reduced end being unable to pass tube 3.

The shoulder end of tube 5 has an inward shoulder 12. Into tube 5, at its shoulder end, is set spring support 14 up against shoulder 12, and remote end of the shoulder end of tube 5, is bent inwardly as shown to securely hold spring support 14. A spring 15 is set one end into spring support 14, and the other end rests against washer 10. The inside wall of spring support 14 is threaded to receive cap 13.

A key 16 is mounted in cap 13, and is free to revolve. The shank of key 16 passes freely through hole 22 in spring support 14. Said key 16, rotated into spring coil 11 when housing is collapsed, causes its prong 17 to engage with the coils of spring coil 11, thereby securely locking the housing. A teat 18 at the end of key 16, guides the entrance of key 16 into coil spring 11. Into the head of key 16, is set chain ring 19. To open housing, turn key 16 so as to disengage its prong 17 from coil spring 11, and thereupon spring 15 will force the housing fully open and hold same fully open.

Inside of tube 3 is set either a mechanical pencil mechanism or else a fountain pen mechanism neither of which mechanisms are shown in the drawings. Cap 7 may be turned freely between bead 9 of tube 3 and washer 19. The stationary part of a mechanical pencil mechanism is secured to tube 3 on the inside thereof, while the movable part of same is secured to cap 7. By turning the cap 7, the pencil mechanism is operated.

When this housing is used for pencil mechanisms, and a magazine for leads is desired, then I provide tube 6 which has one end reduced as at 20 to fit over tube 5. The other end of tube 6 is curled with an outside bead 21. The tubes 5 and 6 are firmly attached concentrically and co-axially with one another at 20. The space between tubes 5 and 6 serves as a magazine for leads. Cap 13 is unscrewed from the housing to permit

the leads to be placed into the magazine so provided. Cap 13 screwed into the housing, also serves to cover the magazine.

I claim:—

1. In a collapsible housing for writing instruments, a device adapted to lock housing when same is collapsed, comprising a rotatably mounted pronged key associated with one end section of the housing, and a spring coil associated with the other end section of the housing; said pronged key and spring coil being adapted to engage with one another when housing is collapsed.

2. A collapsible housing for writing instruments comprising an inner tube, a middle tube and an outer tube, mounted to slide coaxially within one another, means for preventing said tubes from becoming disassociated, a spring coil associated with inner tube, a removably mounted cap associated with outer tube, and a pronged key rotatably mounted in said cap; said pronged key being adapted to engage with said spring coil to lock housing when same is collapsed.

3. A collapsible housing for writing instruments comprising an inner tube, a middle tube and an outer tube, mounted to slide coaxially within one another, means for preventing said tubes from becoming disassociated, a spring coil associated with inner tube, a removably mounted cap associated with outer tube, a pronged key rotatably mounted in said cap adapted to engage with said spring coil when housing is collapsed so as to lock same, and means for automatically extending housing when same is unlocked.

4. A collapsible housing for writing instruments comprising an inner tube, a middle tube and an outer tube, mounted to slide coaxially within one another, means for preventing said tubes from becoming disassociated, a spring coil associated with inner tube, a removably mounted cap associated with outer tube, a pronged key rotatably mounted in said cap adapted to engage with said spring coil when housing is collapsed so as to lock same, and a spring to force housing open when said pronged key is disengaged from spring coil.

In witness whereof, I affix my signature.

AARON SHATKIN.